MATERIAL SAFETY DATA SHEET

PRODUCT NAME: MAPLLC MID GRADE UNLEADED GASOLINE WITH ETHANOL
MARATHON MSDS NO: 0128MAR019

MARATHON ASHLAND Petroleum LLC

1. Chemical Product and Company Information
2. Composition / Information on Ingredients
3. Hazards Identification
4. First Aid Measures
5. Fire Fighting Measures
6. Accidental Release Measures
7. Handling and Storage
8. Exposure Control / Personal Protection
9. Physical and Chemical Properties
10. Stability and Reactivity
11. Toxicological Information
12. Ecological Information
13. Disposal Considerations
14. Transportation Information
15. Regulatory Information
16. Other Information

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT NAME:
MAPLLC MID GRADE UNLEADED GASOLINE WITH ETHANOL
SYNONYMS:
MAPLLC MID GRADE UNLEADED GASOLINE WITH ETHANOL; MID GRADE UNLEADED GASOLINE WITH ETHANOL, MAPLLC; UNLEADED MID GRADE GASOLINE WITH ETHANOL, MAPLLC

CHEM FAMILY: PETROLEUM HYDROCARBON
CHEM FORMULA: MIXTURE
PRODUCT CODE: NONE

MANUFACTURER / DISTRIBUTOR:
MARATHON ASHLAND PETROLEUM LLC
539 SOUTH MAIN STREET
FINDLAY OH 45840

EMERGENCY PHONE NUMBERS:
(877)627-5463
(800)424-9300

MSDS INFORMATION: (419)421-3070

MSDS REVISION DATE: 07/28/1998

INFORMATION SUPPLIED BY: CRAIG M. PARKER
MANAGER, TOXICOLOGY AND PRODUCT SAFETY

Return to top Return to Gasoline Chemical Safety Data List Return to full Chemical Safety Data List

2. COMPOSITION / INFORMATION ON INGREDIENTS

PRODUCT INFORMATION:

MAPLLC MID GRADE UNLEADED GASOLINE WITH ETHANOL (CAS # 86290-81-5) IS A/AN COMPLEX MIXTURE OF PARAFFINS, CYCLOPARAFFINS, OLEFINS AND AROMATIC HYDROCARBONS HAVING HYDROCARBON CHAIN LENGTHS PREDOMINANTLY IN THE RANGE OF C4 THROUGH C12. COMPONENTS MAY BE PRESENT FROM TRACE AMOUNTS UP TO THE RANGES SHOWN.
***
CONTAINS SMALL AMOUNTS OF DYE AND OTHER ADDITIVES (<0.02%) WHICH ARE NOT CONSIDERED HAZARDOUS AT THE CONCENTRATIONS USED.

	PERCENT RANGE	CAS NUMBER

COMPONENTS:

SATURATED HYDROCARBONS (PARAFFINS AND CYCLOPARAFFINS)	50.00- 75.00	MIXTURE
AROMATIC HYDROCARBONS (INCLUDING BENZENE, TOLUENE, XYLENES, ETHYLBENZENE AND TRIMETHYL BENZENES)	18.00- 36.00	MIXTURE
ETHYL ALCOHOL	5.70- 10.00	64-17-5
XYLENE	4.50- 13.50	1330-20-7
TOLUENE	2.70- 13.50	108-88-3
1,2,4-TRIMETHYLBENZENE	1.80- 4.50	95-63-6
UNSATURATED HYDROCARBONS (OLEFINS)	0.90- 9.00	MIXTURE
ETHYL BENZENE	0.90- 2.70	100-41-4
BENZENE	0.45- 3.20	71-43-2

EXPOSURE GUIDELINES

	LIMIT	TYPE	SOURCE

PRODUCT:

MAPLLC MID GRADE UNLEADED GASOLINE- WITH ETHANOL	300.00 PPM	8 HR TWA	ACGIH
	500.00 PPM	STEL	ACGIH
	300.00 PPM	8 HR TWA	OSHA
	500.00 PPM	STEL	OSHA

COMPONENTS:

SATURATED HYDROCARBONS	NONE ESTABLISHED		
AROMATIC HYDROCARBONS	NONE ESTABLISHED		
ETHYL ALCOHOL	1000.00 PPM	8 HR TWA	ACGIH
	1000.00 PPM	8 HR TWA	OSHA*

* THE MANUFACTURER HAS VOLUNTARILY ELECTED TO REFLECT EXPOSURE LIMITS CONTAINED IN OSHA'S 1989 AIR CONTAMINANTS STANDARD IN ITS MSDS'S, EVEN THOUGH CERTAIN OF THOSE EXPOSURE LIMITS WERE VACATED IN 1992.

XYLENE	100.00 PPM	8 HR TWA	ACGIH
	150.00 PPM	STEL	ACGIH
	100.00 PPM	8 HR TWA	OSHA*
	150.00 PPM	STEL	OSHA*

* THE MANUFACTURER HAS VOLUNTARILY ELECTED

TO REFLECT EXPOSURE LIMITS CONTAINED IN
OSHA'S 1989 AIR CONTAMINANTS STANDARD IN ITS
MSDS'S, EVEN THOUGH CERTAIN OF THOSE EXPOSURE
LIMITS WERE VACATED IN 1992.

TOLUENE	50.00 PPM	8 HR TWA	ACGIH
	100.00 PPM	8 HR TWA	OSHA*
	150.00 PPM	STEL	OSHA*

* THE MANUFACTURER HAS VOLUNTARILY ELECTED
TO REFLECT EXPOSURE LIMITS CONTAINED IN
OSHA'S 1989 AIR CONTAMINANTS STANDARD IN ITS
MSDS'S, EVEN THOUGH CERTAIN OF THOSE EXPOSURE
LIMITS WERE VACATED IN 1992.

1,2,4-TRIMETHYLBENZENE	25.00 PPM	8 HR TWA	ACGIH
	25.00 PPM	8 HR TWA	OSHA*

* THE MANUFACTURER HAS VOLUNTARILY ELECTED
TO REFLECT EXPOSURE LIMITS CONTAINED IN
OSHA'S 1989 AIR CONTAMINANTS STANDARD IN ITS
MSDS'S, EVEN THOUGH CERTAIN OF THOSE EXPOSURE
LIMITS WERE VACATED IN 1992.

UNSATURATED HYDROCARBONS NONE ESTABLISHED

ETHYL BENZENE NONE ESTABLISHED

* THE MANUFACTURER HAS VOLUNTARILY ELECTED
TO REFLECT EXPOSURE LIMITS CONTAINED IN
OSHA'S 1989 AIR CONTAMINANTS STANDARD IN ITS
MSDS'S, EVEN THOUGH CERTAIN OF THOSE EXPOSURE
LIMITS WERE VACATED IN 1992.

BENZENE	.50 PPM	8 HR TWA	ACGIH
	2.50 PPM	STEL	ACGIH
	1.00 PPM	8 HR TWA	OSHA
	5.00 PPM	STEL	OSHA

OSHA ACTION LEVEL 0.50 PPM (8 HR TWA)

Return to top Return to Gasoline Chemical Safety Data List Return to full Chemical Safety Data List

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3. HAZARDS IDENTIFICATION

********** EMERGENCY OVERVIEW **********

GASOLINE IS EITHER A CLEAR OR COLORED LIQUID WITH A STRONG HYDROCARBON ODOR. GASOLINE IS A VOLATILE AND EXTREMELY FLAMMABLE LIQUID AND MAY CAUSE FLASH FIRES. KEEP AWAY FROM HEAT, SPARKS OR FLAME. GASOLINE CAN ALSO CONTAIN SIGNIFICANT CONCENTRATIONS OF BENZENE WHICH HAS BEEN SHOWN TO CAUSE CANCER OR BE TOXIC TO BLOOD-FORMING ORGANS. NEVER SIPHON THIS PRODUCT BY MOUTH. IF SWALLOWED, GASOLINE MAY GET SUCKED INTO THE LUNGS (ASPIRATED) AND CAUSE LUNG DAMAGE OR EVEN DEATH.

OSHA WARNING LABEL:

DANGER!
EXTREMELY FLAMMABLE.

ASPIRATION (INADVERTENT SUCTION) OF LIQUID INTO THE LUNGS
CAN PRODUCE CHEMICAL PNEUMONIA OR EVEN DEATH.
CONTAINS BENZENE WHICH MAY CAUSE
CANCER OR BE TOXIC TO BLOOD-FORMING ORGANS.

ONSUMER WARNING LABEL:

GASOLINE HEALTH & SAFETY WARNING

- EXTREMELY FLAMMABLE, VAPORS MAY EXPLODE
- HARMFUL OR FATAL IF SWALLOWED
- LONG TERM EXPOSURE TO VAPORS HAS CAUSED CANCER IN LABORATORY ANIMALS
- KEEP FACE AWAY FROM NOZZLE WHILE FILLING
- KEEP NOZZLE AWAY FROM EYES AND SKIN
- NEVER SIPHON BY MOUTH
- DON'T OVERFILL TANK

FOR USE AS A MOTOR FUEL ONLY

****

POTENTIAL HEALTH EFFECTS

EYE:

EYE IRRITATION MAY RESULT FROM CONTACT WITH THE LIQUID OR EXPOSURE TO VAPOR CONCENTRATIONS ABOVE THE TLV.

IN:

PROLONGED OR REPEATED LIQUID CONTACT CAN DEFAT THE SKIN AND LEAD TO IRRITATION AND/OR DERMATITIS.

INHALATION:

EXPOSURE TO VAPOR CONCENTRATIONS EXCEEDING 1,000 PPM CAN CAUSE RESPIRATORY IRRITATION, HEADACHE, DIZZINESS, NAUSEA AND LOSS OF COORDINATION. HIGHER CONCENTRATIONS MAY CAUSE LOSS OF CONSCIOUSNESS, CARDIAC SENSITIZATION, COMA AND DEATH RESULTING FROM RESPIRATORY FAILURE.

INTENTIONAL OVEREXPOSURE TO HIGH CONCENTRATIONS OF GASOLINE VAPORS (SUCH AS GASOLINE SNIFFING) CAN CAUSE NERVOUS SYSTEM AND BRAIN DAMAGE, CONVULSIONS AND SUDDEN DEATH FROM CARDIAC ARREST.

INGESTION:

INGESTION MAY RESULT IN NAUSEA, VOMITING, DIARRHEA AND RESTLESSNESS. ASPIRATION (INADVERTENT SUCTION) OF LIQUID INTO THE LUNGS MUST BE AVOIDED AS EVEN SMALL QUANTITIES IN THE LUNGS CAN PRODUCE CHEMICAL PNEUMONITIS, PULMONARY EDEMA/HEMORRHAGE AND EVEN DEATH.

RCINOGEN LISTING:

THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS DETERMINED THAT

THERE IS INADEQUATE EVIDENCE FOR THE CARCINOGENICITY OF GASOLINE IN HUMANS. IARC DETERMINED THAT LIMITED EVIDENCE OF CARCINOGENICITY IN ANIMALS EXISTS. IARC'S OVERALL EVALUATION OF GASOLINE, IN SPITE OF LIMITED CARCINOGENICITY EVIDENCE, HAS RESULTED IN THE IARC DESIGNATION OF GASOLINE AS POSSIBLY CARCINOGENIC TO HUMANS (GROUP 2B) BECAUSE GASOLINE CONTAINS BENZENE. THE NATIONAL TOXICOLOGY PROGRAM (NTP), OSHA AND IARC HAVE DETERMINED THAT THERE IS SUFFICIENT EVIDENCE FOR THE CARCINOGENICITY OF BENZENE IN HUMANS (GROUP 1A).

IARC HAS DETERMINED THAT THERE IS SUFFICIENT EVIDENCE FOR THE CARCINOGENICITY OF ALCOHOLIC BEVERAGES (ETHANOL) IN HUMANS (GROUP 1).

IARC HAS DETERMINED THAT THERE IS INADEQUATE EVIDENCE FOR THE CARCINOGENICITY OF GASOLINE ENGINE EXHAUST IN HUMANS OR ANIMALS. HOWEVER, IARC'S OVERALL EVALUATION ON GASOLINE ENGINE EXHAUST, IN SPITE OF THE ABSENCE OF CARCINOGENICITY DATA, HAS RESULTED IN THE IARC DESIGNATION OF GASOLINE ENGINE EXHAUST AS POSSIBLY CARCINOGENIC TO HUMANS (GROUP 2B) BECAUSE OF THE PRESENCE OF CERTAIN ENGINE EXHAUST COMPONENTS.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

PRE-EXISTING EYE, SKIN, RESPIRATORY, LIVER AND/OR KIDNEY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO GASOLINE.

Return to top Return to Gasoline Chemical Safety Data List Return to full Chemical Safety Data List

4. FIRST AID MEASURES

EYE:

FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. IF SYMPTOMS OR IRRITATION OCCUR, CALL A PHYSICIAN.

SKIN:

WASH WITH SOAP AND LARGE AMOUNTS OF WATER. REMOVE CONTAMINATED CLOTHING. IF SYMPTOMS OR IRRITATION OCCUR, CALL A PHYSICIAN.

INHALATION:

IF AFFECTED, MOVE PERSON TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF NOT BREATHING OR IF NO HEARTBEAT, GIVE ARTIFICIAL RESPIRATION OR CARDIOPULMONARY RESUSCITATION (CPR). IMMEDIATELY CALL A PHYSICIAN. IF SYMPTOMS OR IRRITATION OCCUR WITH ANY EXPOSURE, CALL A PHYSICIAN.

INGESTION:

DO NOT INDUCE VOMITING. DO NOT GIVE LIQUIDS. IMMEDIATELY CALL A PHYSICIAN.

NOTES TO PHYSICIAN:

NO DATA AVAILABLE.

urn to top Return to Gasoline Chemical Safety Data List Return to full Chemical Safety Data List

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

FLASH POINT:	-50 F
AUTOIGNITION TEMP:	C.A. 495 F
EXPLOSIVE LIMITS (% BY VOLUME IN AIR)	
LOWER:	1.4
UPPER:	7.6

FIRE AND EXPLOSION HAZARDS:

THIS MATERIAL HAS BEEN DETERMINED TO BE A FLAMMABLE LIQUID. VAPORS MAY TRAVEL ALONG THE GROUND OR BE MOVED BY VENTILATION AND IGNITED BY MANY SOURCES SUCH AS PILOT LIGHTS, SPARKS, ELECTRIC MOTORS, STATIC DISCHARGE, OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING. FLASHBACK MAY OCCUR ALONG VAPOR TRAIL. FOR ADDITIONAL FIRE RELATED INFORMATION, SEE NFPA 30 OR NORTH AMERICAN EMERGENCY RESPONSE GUIDE 128.

EXTINGUISHING MEDIA:

FOR SMALL FIRES, CLASS B FIRE EXTINGUISHING MEDIA SUCH AS CO2, DRY CHEMICAL, FOAM (AFFF/ATC) OR WATER SPRAY CAN BE USED. FOR LARGE FIRES, WATER SPRAY, FOG OR FOAM (AFFF/ATC) CAN BE USED. FIRE FIGHTING SHOULD BE ATTEMPTED ONLY BY THOSE WHO ARE ADEQUATELY TRAINED AND EQUIPPED WITH PROPER PROTECTIVE EQUIPMENT.

SPECIAL FIRE FIGHTING INSTRUCTIONS:

AVOID USE OF STRAIGHT WATER STREAMS. WATER MAY BE INEFFECTIVE IN EXTINGUISHING LOW FLASH POINT FIRES, BUT CAN BE USED TO COOL EXPOSED SURFACES. AVOID EXCESSIVE WATER SPRAY APPLICATION. WATER SPRAY AND FOAM (AFFF/ATC) MUST BE APPLIED CAREFULLY TO AVOID FROTHING AND FROM AS FAR A DISTANCE AS POSSIBLE. KEEP RUN-OFF WATER OUT OF SEWERS AND WATER SOURCES.

Return to top Return to Gasoline Chemical Safety Data List Return to full Chemical Safety Data List

6. ACCIDENTAL RELEASE MEASURES

:OLATE AND EVACUATE AREA. SHUT OFF SOURCE IF SAFE TO DO SO. ELIMINATE ALL IGNITION SOURCES. ADVISE NATIONAL RESPONSE CENTER (800-424-8802) IF PRODUCT HAS ENTERED A WATERWAY. NOTIFY LOCAL HEALTH AND POLLUTION CONTROL

AGENCIES, IF APPROPRIATE. CONTAIN LIQUID WITH SAND OR SOIL. RECOVER AND RETURN FREE LIQUID TO PROPER CONTAINERS. USE SUITABLE ABSORBENT MATERIALS SUCH AS VERMICULITE, SAND OR CLAY TO CLEAN UP RESIDUAL LIQUIDS.

turn to top Return to Gasoline Chemical Safety Data List Return to full Chemical Safety Data List

7. HANDLING AND STORAGE

FOR USE AS A MOTOR FUEL ONLY. GASOLINE SHOULD NEVER BE USED AS A SOLVENT DUE TO ITS FLAMMABLE AND POTENTIALLY TOXIC PROPERTIES. SIPHONING BY MOUTH CAN RESULT IN LUNG ASPIRATION WHICH CAN BE HARMFUL OR FATAL.

PORTABLE CONTAINERS OF 12 GALLONS (45 LITERS) OR LESS SHOULD NEVER BE FILLED WITH GASOLINE WHILE THEY ARE IN OR ON A MOTOR VEHICLE OR MARINE CRAFT. STATIC ELECTRIC DISCHARGE CAN IGNITE FUEL VAPORS WHEN FILLING NON-GROUNDED CONTAINERS OR VEHICLES ON TRAILERS. CONTAINERS SHOULD BE PLACED ON THE GROUND. THE NOZZLE SPOUT MUST BE KEPT IN CONTACT WITH THE CONTAINER BEFORE AND DURING THE ENTIRE FILLING OPERATION. USE ONLY APPROVED CONTAINERS.

COMPLY WITH ALL APPLICABLE OSHA, NFPA AND CONSISTENT LOCAL REQUIREMENTS. USE APROPRIATE GROUNDING AND BONDING PRACTICES. STORE IN PROPERLY CLOSED CONTAINERS THAT ARE APPROPRIATELY LABELED AND IN A COOL WELL-VENTILATED AREA. DO NOT EXPOSE TO HEAT, OPEN FLAME, OXIDIZERS OR OTHER SOURCES OF IGNITION. DO NOT CUT, DRILL, GRIND OR WELD ON EMPTY CONTAINERS SINCE THEY MAY CONTAIN EXPLOSIVE RESIDUES. AVOID SKIN CONTACT. EXERCISE GOOD PERSONAL HYGIENE INCLUDING REMOVAL OF SOILED CLOTHING AND PROMPT WASHING WITH SOAP AND WATER.

Return to top Return to Gasoline Chemical Safety Data List Return to full Chemical Safety Data List

8. EXPOSURE CONTROL / PERSONAL PROTECTION

ENGINEERING CONTROLS:

LOCAL OR GENERAL EXHAUST REQUIRED IN AN ENCLOSED AREA OR WITH INADEQUATE VENTILATION.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION:

APPROVED ORGANIC VAPOR CHEMICAL CARTRIDGE OR SUPPLIED AIR RESPIRATORS SHOULD BE WORN FOR EXPOSURES EXCEEDING THE TLV OR STEL. OBSERVE RESPIRATOR PROTECTION FACTOR CRITERIA CITED IN ANSI Z88.2. SELF-CONTAINED BREATHING APPARATUS SHOULD BE USED FOR FIRE FIGHTING.

SKIN PROTECTION:

USE NITRILE RUBBER, VITON OR PVA GLOVES FOR REPEATED OR PROLONGED SKIN EXPOSURE.

EYE PROTECTION:

NO SPECIAL EYE PROTECTION IS NORMALLY REQUIRED. WHERE SPLASHING IS POSSIBLE, WEAR SAFETY GLASSES WITH SIDE SHIELDS.

OTHER PROTECTIVE EQUIPMENT:

NO SPECIAL PROTECTIVE CLOTHING IS NORMALLY REQUIRED. SELECT PROTECTIVE CLOTHING DEPENDING ON INDUSTRIAL OPERATIONS.

USE MECHANICAL VENTILATION EQUIPMENT THAT IS EXPLOSION-PROOF.

Return to top Return to Gasoline Chemical Safety Data List Return to full Chemical Safety Data List

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9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:	90-437 F
MELTING POINT:	NO DATA AVAILABLE
SPECIFIC GRAVITY (H20=1):	0.70-0.77
PACKING DENSITY (KG/M3):	NO DATA AVAILABLE
% SOLUBILITY IN WATER:	NEGLIGIBLE
VAPOR DENSITY (AIR=1):	3-4
VAPOR PRESSURE:	403-776 MMHG @ 100 F
INFORMATION:	NO DATA AVAILABLE
% VOLATILES BY VOL:	100%
EVAPORATION RATE:	NO DATA AVAILABLE
APPEARANCE:	CLEAR OR COLORED LIQUID
ODOR:	STRONG HYDROCARBON
ODOR THRESHOLD (PPM):	0.25 PPM

ADDITIONAL PROPERTIES:

DENSITY: 5.9-6.3 LBS/GALLON
AVERAGE MOLECULAR WEIGHT: 100

Return to top Return to Gasoline Chemical Safety Data List Return to full Chemical Safety Data List

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10. STABILITY AND REACTIVITY

STABILITY:

THE MATERIAL IS STABLE AT 70 F, 760 MM PRESSURE.

CONDITIONS TO AVOID:

EXCESSIVE HEAT, SOURCES OF IGNITION.

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE, ALDEHYDES, AROMATIC HYDROCARBONS.

INCOMPATIBLE MATERIALS:

STRONG OXIDIZING AGENTS SUCH AS CHLORATES, NITRATES, PEROXIDES.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR.

CONDITIONS TO AVOID:

NO DATA AVAILABLE.

ADDITIONAL COMMENTS:

NO DATA AVAILABLE.

Return to top Return to Gasoline Chemical Safety Data List Return to full Chemical Safety Data List

11. TOXICOLOGICAL INFORMATION

ANIMAL STUDIES:

LIFETIME INHALATION STUDIES WITH FULL VAPORIZED GASOLINE (67, 292 AND 2,056 PPM) PRODUCED KIDNEY DAMAGE AND KIDNEY TUMORS IN MALE RATS BUT NOT IN FEMALE RATS OR MALE AND FEMALE MICE. FEMALE MICE DEVELOPED A SLIGHTLY HIGHER INCIDENCE OF LIVER TUMORS COMPARED TO CONTROLS AT THE HIGHEST EXPOSURE LEVEL. RESULTS FROM SEPARATE STUDIES WITH COMPOUNDS PRODUCING SIMILAR EFFECTS, I.E., 1,4-DICHLOROBENZENE AND PERCHLOROETHYLENE, HAVE SHOWN THAT THE KIDNEY DAMAGE AND KIDNEY TUMORS DEVELOP VIA THE FORMATION OF ALPHA-2U-GLOBULIN, A MECHANISM UNIQUE TO THE MALE RAT. HUMANS DO NOT FORM ALPHA-2U-GLOBULIN, THEREFORE, TUMORS RESULTING FROM THIS MECHANISM ARE NOT RELEVANT IN HUMANS. THE BIOLOGIC SIGNIFICANCE OF THE MOUSE LIVER TUMOR RESPONSE WITH REGARD TO HUMAN HEALTH RISK IS QUESTIONABLE.

GASOLINE ENGINE EXHAUST ANIMAL STUDIES:

COMBUSTION OF GASOLINE PRODUCES GASES AND PARTICULATES WHICH INCLUDE CARBON MONOXIDE, CARBON DIOXIDE, OXIDES OF NITROGEN AND/OR SULFUR AND HYDROCARBONS. EXPOSURE TO HIGH CONCENTRATIONS OF CARBON MONOXIDE (CO) CAN CAUSE HYPOXIA VIA THE FORMATION OF CARBOXYHEMOGLOBIN. OVEREXPOSURE TO CO CAN CAUSE HEADACHE, NAUSEA, NERVOUS SYSTEM DEPRESSION, COMA AND DEATH. CHRONIC INHALATION STUDIES OF GASOLINE ENGINE EXHAUST IN MICE, RATS AND HAMSTERS DID NOT PRODUCE ANY CARCINOGENIC EFFECTS. CONDENSATES/EXTRACTS OF GASOLINE ENGINE EXHAUST PRODUCED AN INCREASE IN TUMORS COMPARED TO CONTROLS WHEN TESTING BY SKIN PAINTING, SUBCUTANEOUS INJECTION, INTRATRACHEAL

INSTILLATION OR IMPLANTATION INTO THE LUNGS.

SUMMARY OF HEALTH EFFECT DATA ON GASOLINE COMPONENTS:

THIS PRODUCT CONTAINS BENZENE AT A LEVEL OF >0.1%. REPEATED OR PROLONGED EXPOSURE TO BENZENE AT CONCENTRATIONS IN EXCESS OF THE TLV MAY CAUSE SERIOUS INJURY TO BLOOD-FORMING ORGANS. SIGNIFICANT CHRONIC EXPOSURE TO BENZENE VAPOR HAS BEEN REPORTED TO PRODUCE VARIOUS BLOOD DISORDERS RANGING FROM ANEMIA TO CANCER (DIFFERENT FORMS OF LEUKEMIA) IN MAN. BENZENE PRODUCED TUMORS IN RATS AND MICE IN LIFETIME CHRONIC TOXICITY STUDIES, BUT THE RESPONSE HAS NOT BEEN CONSISTENT ACROSS SPECIES, STRAIN, SEX OR ROUTE OF EXPOSURE. ANIMAL STUDIES ON BENZENE HAVE DEMONSTRATED IMMUNE TOXICITY, CHROMOSOMAL ABERRATIONS, TESTICULAR EFFECTS AND ALTERATIONS IN REPRODUCTIVE CYCLES AND EMBRYO/FETOTOXICITY, BUT NOT TERATOGENICITY.

THIS PRODUCT MAY CONTAIN ETHANOL AT A LEVEL OF >1.0%. INTENTIONAL ABUSE, MISUSE OR OTHER MASSIVE EXPOSURE TO ETHANOL MAY RESULT IN MULTIPLE ORGAN DAMAGE AND/OR DEATH. CHRONIC INGESTION OF LARGE AMOUNTS OF ETHANOL CAN CAUSE CANCER AND DAMAGE TO THE LIVER, KIDNEY, HEART, BRAIN, NERVOUS SYSTEM AND STOMACH. ETHYL ALCOHOL INGESTION DURING PREGNANCY CAN ADVERSELY AFFECT THE UNBORN CHILD. STUDIES IN LABORATORY ANIMALS INVOLVING PROLONGED AND REPEATED EXPOSURES HAVE RESULTED IN SUCH EFFECTS AS EMBRYOTOXICITY, DEVELOPMENTAL TOXICITY AND TERATOGENICITY. MUTAGENIC EFFECTS HAVE BEEN REPORTED IN BOTH IN VITRO AND IN VIVO SYSTEMS BUT USUALLY AT HIGH DOSAGES.

COMPONENTS OF GASOLINE DO NOT PRESENT A SIGNIFICANT HEALTH RISK IN THE CONCENTRATIONS PRESENT IN GASOLINE AT EXPOSURES NOT EXCEEDING THE EXPOSURE LIMITS STATED IN SECTION 2.

Return to top Return to Gasoline Chemical Safety Data List Return to full Chemical Safety Data List

12. ECOLOGICAL INFORMATION

PRODUCT CAN CAUSE FOULING OF SHORELINES AND IS HARMFUL TO AQUATIC LIFE IN LOW CONCENTRATIONS. THERE IS NO POTENTIAL FOR ACCUMULATION IN THE FOOD CHAIN.

FRESHWATER TOXICITY:

BLUEGILL:	LC50 IS 8 PPM @ 96 HOURS
JUVENILE SHAD:	TLM IS 90 PPM @ 24 HOURS

SALTWATER TOXICITY:

MULLET:	LC50 IS 2 PPM @ 96 HOURS
GRASS SHRIMP:	LC50 IS 1.5 PPM @ 96 HOURS
MENHADEN:	LC50 IS 2 PPM @ 96 HOURS
JUVENILE SHAD:	TLM IS 91 PPM @ 24 HOURS

Return to top Return to Gasoline Chemical Safety Data List Return to full Chemical Safety Data List

13. DISPOSAL CONSIDERATIONS

THIS MATERIAL AS SUPPLIED IS NOT SPECIFICALLY LISTED AS AN EPA RCRA HAZARDOUS WASTE ACCORDING TO FEDERAL REGULATIONS (40 CFR 261-271). HOWEVER, WHEN DISCARDED OR DISPOSED OF, IT MAY MEET THE CRITERIA OF AN

"IGNITABLE" HAZARDOUS WASTE. THIS PRODUCT COULD ALSO CONTAIN BENZENE AT >0.5 PPM AND COULD EXHIBIT THE CHARACTERISTICS OF "TOXICITY" AS DETERMINED BY THE TOXICITY LEACHING PROCEDURE (TCLP). THIS MATERIAL COULD ALSO BECOME A HAZARDOUS WASTE IF MIXED OR CONTAMINATED WITH A LISTED HAZARDOUS WASTE. IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE IF DISPOSAL MATERIAL IS HAZARDOUS ACCORDING TO FEDERAL, STATE AND LOCAL REGULATIONS.

Return to top Return to Gasoline Chemical Safety Data List Return to full Chemical Safety Data List

14. TRANSPORTATION INFORMATION

49 CFR 172.101:

PROPER SHIPPING NAME:	GASOLINE
DOT CLASSIFICATION:	3
DOT IDENTIFICATION NUMBER:	UN 1203
PACKING GROUP:	PG II

Return to top Return to Gasoline Chemical Safety Data List Return to full Chemical Safety Data List

15. REGULATORY INFORMATION

THE FOLLOWING REGULATIONS APPLY TO THIS PRODUCT:

OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200):

THIS PRODUCT HAS BEEN EVALUATED AND DETERMINED TO BE HAZARDOUS AS DEFINED IN OSHA'S HAZARD COMMUNICATION STANDARD.

EPA TOXIC SUBSTANCES CONTROL ACT (40 CFR PART 710):

THIS PRODUCT AND/OR ITS COMPONENTS ARE LISTED ON THE TSCA CHEMICAL INVENTORY.

EPA SARA TITLE III SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT - EMERGENCY PLANNING & COMMUNITY RIGHT-TO-KNOW ACT OF 1986.

EXTREMELY HAZARDOUS SUBSTANCES (40 CFR PART 355):

THIS PRODUCT CONTAINS THE FOLLOWING COMPONENT(S) IDENTIFIED ON APPENDIX A AND B OF THE EXTREMELY HAZARDOUS SUBSTANCE LIST (AT A LEVEL OF 1% OR GREATER IF HAZARDOUS; 0.1% OR GREATER IF CARCINOGENIC): NONE.

EMERGENCY RELEASE NOTIFICATIONS (40 CFR PART 355):

THIS PRODUCT CONTAINS THE FOLLOWING COMPONENT(S) IDENTIFIED EITHER AS AN EXTREMELY HAZARDOUS SUBSTANCE (40 CFR 355) OR A CERCLA HAZARDOUS SUBSTANCE (40 CFR 302) WHICH IN CASE OF A SPILL OR RELEASE MAY BE SUBJECT TO EMERGENCY RELEASE REPORTING REQUIREMENTS: NONE.

MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR PART 370):

THE FOLLOWING EPA HAZARD CATEGORIES APPLY TO THIS PRODUCT:

IMMEDIATE (ACUTE) HEALTH HAZARD
DELAYED (CHRONIC) HEALTH HAZARD
FIRE HAZARD

MSDS'S OR A LIST OF MSDS'S AND THEIR HAZARDS (SEE EPA HAZARD CATEGORIES ABOVE) MAY BE REQUIRED TO BE SUBMITTED TO THE STATE EMERGENCY RESPONSE COMMISSION (SERC), LOCAL EMERGENCY PLANNING COMMITTEE (LEPC) AND LOCAL FIRE DEPARTMENT (LFD).

IN ADDITION, A TIER II OR TIER I FORM MAY BE REQUIRED TO BE SUBMITTED AN